What we claim is:

1. In a telecommunications device having a signal input, an electrostatic overvoltage protection device, comprising:

a conductor connected between said signal input and a source of reference potential.

2. The electrostatic overvoltage protection device of Claim 1, wherein:

said conductor has a length selected to be one quarter of the wavelength of a desired signal band frequency, and

the source of reference potential is a ground potential.

3. The electrostatic overvoltage protection device of Claim 2, wherein:

the conductor of one quarter wavelength is one of a trace on a circuit board and a wire.

4. The electrostatic overvoltage protection device of Claim 2, further comprising:

a T-connector having an external housing and with a through conductor between the main end terminals, and a side conductor connected at one end to the to said through conductor and at the other end to the side end terminal of said T-connector, and

a shorting structure connecting said other end of said side conductor to said T-connector external housing, wherein

said conductor of one quarter wavelength is measured from said one end of said side conductor to said shorting structure.

5. The electrostatic overvoltage protection device of Claim 4, wherein:

said shorting structure further comprises a conductive cap with a conductive pin adapted to fit into said T-connector side end terminal and thus make electrical connection between the combination of said conductive pin and said side conductor and said T-connector external housing.

6. A telecommunications device having an antenna, comprising:

a bi-directional switched amplifier, said amplifier being switched between transmit (TX) and receive (RX) modes,

said bi-directional switched amplifier further being located physically adjacent to said antenna, such that signal losses between said bi-directional switched amplifier and said antenna are negligible.

7. A waterproof housing arrangement for an active electronic device having at least one external connection, comprising:

a housing containing said active electronic device which is waterproof on all sides except for the side containing said at least one external connection;

mounting said housing such that said side containing said at least one external connection is in a downward position.

8. A waterproof housing arrangement for an active electronic device as in Claim 7, further comprising a first conductor connected to said at least one external connection, said first conductor forming a U-loop beneath said housing.

9. A waterproof housing arrangement for an active electronic device as in Claim 8, further comprising:

a second external connection, said second external connection also being located on the downward side of said housing, and further being connected to a source of direct current power through a second conductor;

said first conductor leading away from said downward side of said housing and being connected to an antenna located adjacent said housing.

10. A waterproof housing arrangement for an active electronic device as in Claim 9, wherein:

said antenna is located adjacent to said housing such that losses between said active electronic device and said antenna are negligible.

11. A waterproof housing arrangement for an active electronic device as in Claim 7, wherein:

said housing is mounted to a pole.

12. A waterproof housing arrangement for an active electronic device as in Claim 11, wherein:

said pole is in a vertical direction.

13. A waterproof housing arrangement for an active electronic device as in Claim 12, wherein:

said housing is attached to said pole by a V-bolt fastener.

14. A waterproof housing arrangement for an active electronic device as in Claim 12, wherein:

said housing is attached to said pole through an L-shaped bracket, said L-shaped bracket being attached to the top of said housing, and

a V-bolt fastener connecting said L-bracket to said pole.

15 The waterproof housing arrangement for an active electronic device as in Claim 14 wherein:

said L-shaped bracket further being of sufficiently large size so as to overhang at least three vertical sides of said housing, to thus provide additional waterproofing to said housing.

16. The waterproof housing arrangement for an active electronic device as in Claim 7, wherein:

said active electronic device is a bi-directional switched amplifier.

17. A mounting arrangement for an external connection to an electrical circuit, comprising:

a housing,

a connector for said external connection, said connector protruding through a wall of said housing,

said connector having a flange, one side of said flange directly abutting the inside wall of said housing,

said electrical circuit being mounted on a substantially planar board having two sides, and

the other side of said flange of said connector abutting and being directly connected to one side of said planar board.

18. The mounting arrangement for an external connection to an electrical circuit as in Claim 17, wherein:

said connector is a coaxial connector, and

the center contact of said coaxial connector protrudes through and is connected to the second side of said planar board, to provide for minimum VSWR from said coaxial connector to said planar board.

19. The mounting arrangement for an external connection to an electrical circuit as in Claim 18, wherein:

said housing has a cover, and

said coaxial connector protrudes through an aperature in said cover.

20. A bi-directional switched RF amplifier, comprising:

an external connection to an antenna,

an external connection to a transceiver radio,

a transmitting (TX) amplifier,

a receiving (RX) amplifier,

said transmitting and said receiving amplifiers being arranged between said radio and antenna external connections,

a double pole, double throw switch, one switch pole connected to said radio external connection and the other switch pole being connected to said antenna external connection,

such that when said double pole, double throw switch is in one position the transmitting amplifier is disconnected from said external connections, and the input of said receiving amplifier is connected to said

antenna external connection and the output of said receiving amplifier is connected to said radio external connection,

such that when said double pole, double throw switch is in the other position the receiving amplifier is disconnected from said external connections, and the input of said transmitting amplifier is connected to said radio external connection and the output of said transmitting amplifier is connected at said antenna external connection, and

said position of said double pole, double throw switch being controlled by a transmit power sense circuit.

21. A bi-directional switched RF amplifier as in claim 20, wherein: said receiving amplifier is a low noise amplifier.

22. A bi-directional switched RF amplifier as in Claim 21, additionally comprising:

a bandpass filter connected between said antenna external connection and said receiving amplifier input, and

pads, including attenuation pads, connected to at least one of said receiving amplifier output and said transmitting amplifier input.

23. A bi-directional switched RF amplifier as in Claim 20, wherein:

the powering for both said receiving amplifier and said transmitting amplifier is a source of DC potential applied through said external connection to a radio transceiver through a DC power injector.

24. A direct current (DC) power injector circuit for a remote bi-directional switched RF amplifier, comprising:

a source of direct current connected to said remote bi-directional switched RF amplifier through a current sensor.

25. A direct current (DC) power injector circuit for a remote bi-directional switched RF amplifier as in Claim 24, further comprising:

a connection from said current sensor through a capacitor to a radio transceiver.

26. A direct current (DC) power injector circuit for a remote bi-directional switched RF amplifier as in Claim 25, wherein:

said current sensor comprises a power resistor with two terminals in series between said source of direct current and said remote bi-directional switched RF amplifier,

and,

a differential voltage comparator is connected across said power resistor terminals to determine the operational mode of said remote bi-directional switched RF amplifier.

27. A direct current (DC) power injector circuit for a remote bi-directional switched RF amplifier as in Claim 26, further comprising:

a pair of indicator lights, only one of which will be on at any time, to thus indicate said operational mode, either receive RX or transmit TX, of said remote bi-directional switched RF amplifier.

28. Temperature compensated RF sensing circuitry, comprising:

a first voltage reference connected between a power supply voltage and a reference potential,

a thermistor being connected to said first voltage reference to provide temperature compensation therefor,

the output of said first voltage reference connected to one end of a pair of series connected diodes, said output of said first voltage reference forward biasing said pair of series connected diodes in the forward direction to just below the point of conduction,

the common connection between said pair of serially connected diodes being coupled to an external source of radio frequency (RF) signal,

the other end of said pair of serially connected diodes being connected to a comparator circuit, wherein:

when the amplitude of the source of radio frequency signal is zero or below a predetermined threshold, this generates one state output of the comparator circuit, and

when the amplitude of the source of radio frequency signal is at or above said predetermined threshold, this generates a second state output of the comparator circuit.

29. A temperature compensated RF detection circuit as in Claim 28, wherein:

said source of radio frequency signal is a transceiver, remote from said temperature compensated RF detection circuit, and

said comparator circuit output states control a bi-directional switching radio frequency amplifier to control said amplifier into either a receive or a transmit condition.

30. A temperature compensated RF detection circuit as in Claim 29, wherein:

a second voltage reference with an output is connected between a power supply voltage and a reference potential,

said comparator circuit comprises a pair of differential comparators, each with two inputs and an output respectively,

one input of each of said pair of differential comparators is connected to said output of said second voltage reference,

the other input of one of said pair of differential comparators is connected to said other end of said pair of serially connected diodes, and

the other input of the other of said pair of differential comparators is connected to the output of said one of said pair of differential comparators,

whereby only one of said pair of differential comparators has a High output at any time, thereby indicating said amplitude of said source of radio frequency signal.

31. A temperature compensated RF detection circuit as in Claim 30, wherein:

said first and second voltage references comprise a plurality of serially resistors between said power supply voltage and said reference potential.

32. A telecommunications system, comprising:

a remote bi-directional switched radio frequency (RF) amplifier in a waterproofed housing with an adjacently mounted antenna and a first connection to said antenna located on the lower side of said waterproofed housing,

a single radio frequency and direct current power line connected between a second connection to said lower side of said waterproofed housing and a direct current power injector removed from said antenna,

a radio transceiver connected to said direct current power injector, and,

a terminal device connected to said radio transceiver to communicate data through said system.

33. A method of sensing the discrete operational states of a device remote from a direct current power supply powering said device, said discrete operational states each using different levels of electrical power, comprising:

putting the current being drawn by said device through a series connected resistor,

sensing the voltage drop across said resistor by a differential voltage comparator, and

optically outputting the results of said comparator, said output indicating one of said discrete operational states of said device.